Aliaxis
UTILITIES & INDUSTRY

FIP

VEE DN 10÷50
PVC-U

Easyfit 2-way ball valve

VEE
DN 10÷50

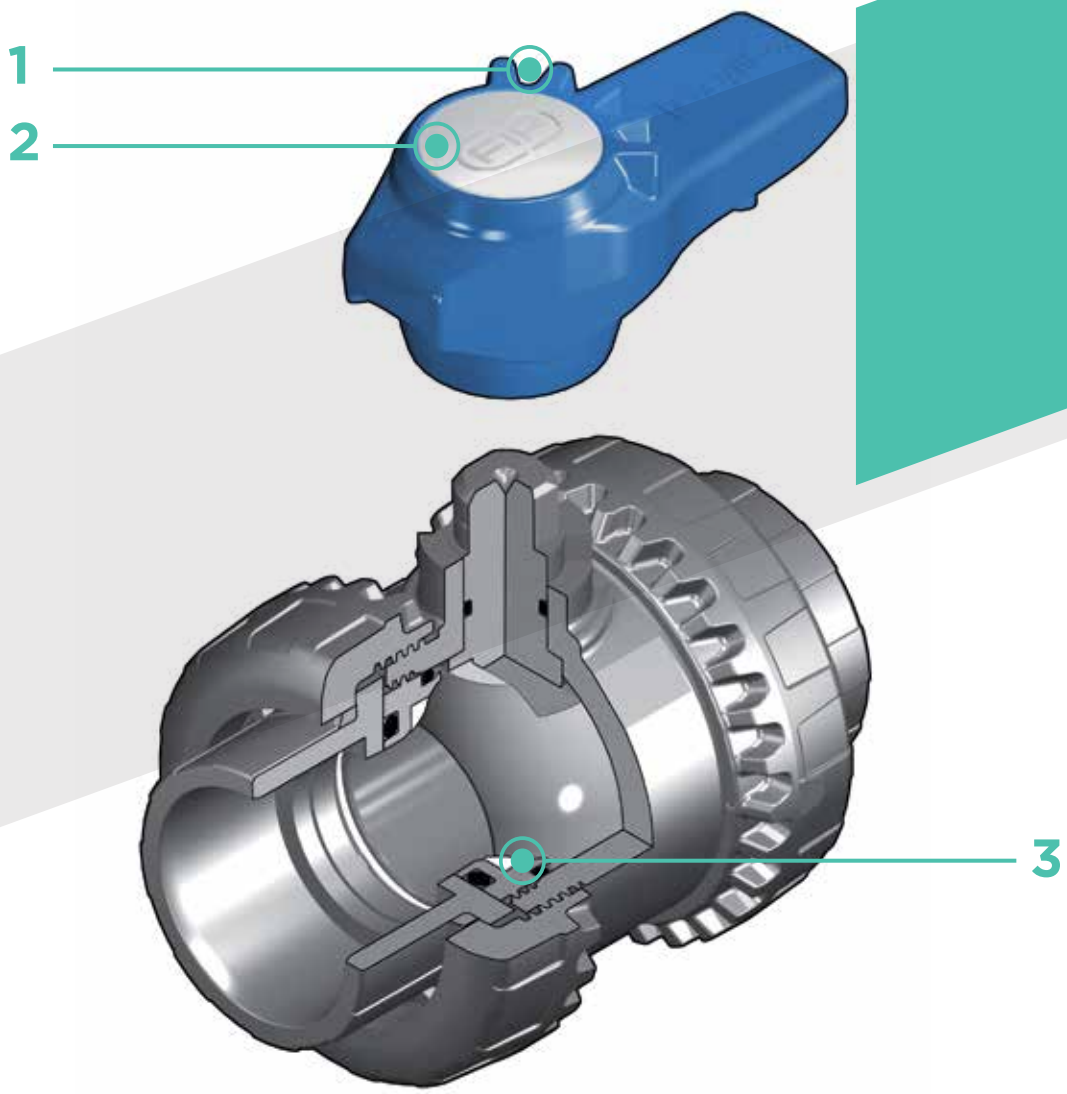
FIP and Giugiaro Design designed and developed VEE Easyfit, the innovative True Union ball valve with union nut tightening control, that permits simple and safe installation for reliable service in time.

easyfit
GIUGIARO DESIGN

EASYFIT 2-WAY BALL VALVE

- **Patented Easyfit system**: innovative mechanism based on the principle of the bevel gear pair that controls valve union nut rotation during installation.
- Connection system for solvent weld and threaded joints
- **Valve material compatibility** (PVC-U) with water, drinking water and other food substance conveyance according to **current regulations**
- Easy radial dismounting allowing quick replacement of O-rings and ball seats without any need for tools
- **PN16 True Union valve body** made for PVC-U injection moulding and European Directive 97/23/EC compliant for PED pressurised equipment. ISO 9393 compliant test requirements
- **Short face to face dimension** according to international regulation ISO 7508 series III and European regulation EN 1452 "short" and fully interchangeable with previous VE series models
- Option of dismounting downstream pipes with the valve in the closed position
- Floating **full bore ball** with high surface finish made in CNC work stations to achieve precise dimensional tolerance and high surface finish

Technical specifications	
Construction	Easyfit 2-way True Union ball valve with locked carrier
Size range	DN 10 ÷ 50
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** EN ISO 1452, EN ISO 15493, BS 4346-1, DIN 8063, NF T54-028, ASTM D 2467, JIS K 6743. Pipe coupling capacity according to EN ISO 1452, EN ISO 15493, DIN 8062, NF T54-016, ASTM D 1785, JIS K 6741
	Thread: ISO 228-1, DIN 2999, ASTM D 2467, JIS B 0203.
Reference standards	**Construction criteria:** EN ISO 16135, EN ISO 1452, EN ISO 15493
	Test methods and requirements: ISO 9393
	Installation criteria: DVS 2204, DVS 2221, UNI 11242
	Actuator couplings: ISO 5211
Valve material	PVC-U
Seal material	EPDM (standard size O-Ring); PE (ball seats)
Control options	Manual control



1 Two position **Easyfit ergonomic multifunctional handle with union nut tightening control which can be used to adjust ball seat carriers**. Handle use is especially indicated for **maintenance** work where **space is limited** and hard to access

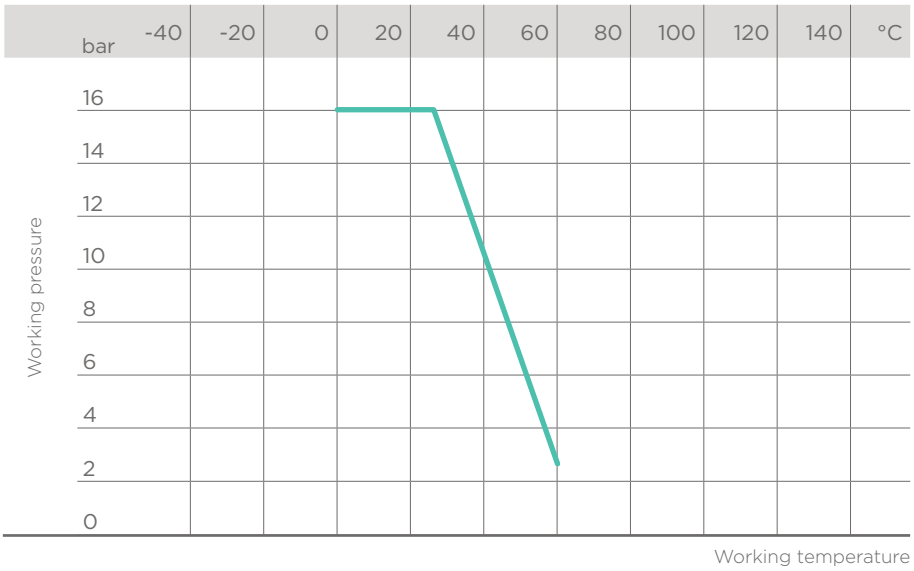
2 Settings for the customisable Labelling System using the LCE module (available as an accessory). The grey protection plug housed on the handle can be replaced with the transparent plug and customisable tag holder with the LSE set (available as an accessory). The **customisation** lets you **identify the valve on the system** according to specific needs

3 **The PE ball seat system with locked carrier** adjustable via Easyfit multifunctional handle or Easytorque adjustment kit (available as an accessory)

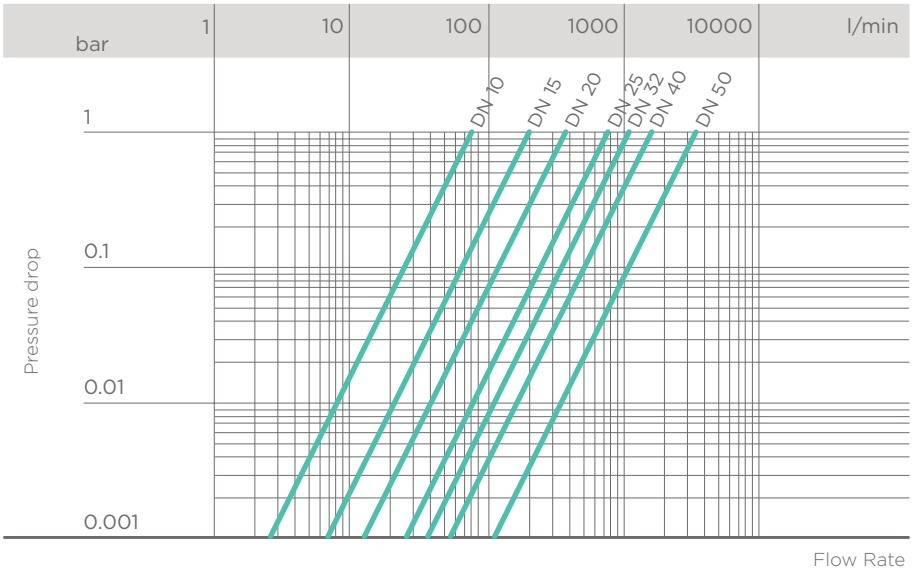
TECHNICAL DATA

PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and harmless fluids to which the material is classified as CHEMICALLY RESISTANT. In other cases, a reduction of the nominal PN pressure is required (25 years with safety factor).



PRESSURE DROP GRAPH



K_v100 FLOW COEFFICIENT

The K_v100 flow coefficient is the Q flow rate of litres per minute of water at a temperature of 20°C that will generate Δp= 1 bar pressure drop at a certain valve position.

The K_v100 values shown in the table are calculated with the valve completely open.

DN	10	15	20	25	32	40	50
K_v100 l/min	80	200	385	770	1100	1750	3400

DIMENSIONS

VEEIV

Easyfit 2-way ball valve with female ends for solvent welding, metric series

d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
16	10	16	49	64	44	54	82	14	54	180	VEEIV016E
20	15	16	49	64	44	54	82	16	50	175	VEEIV020E
25	20	16	62	78	55	63	91	19	53	260	VEEIV025E
32	25	16	71	87	60	72	103	22	59	365	VEEIV032E
40	32	16	82	102	72	85	120	26	68	565	VEEIV040E
50	40	16	92	109	76	100	139	31	77	795	VEEIV050E
63	50	16	110	133	94	118	174	38	98	1325	VEEIV063E

VEEFV

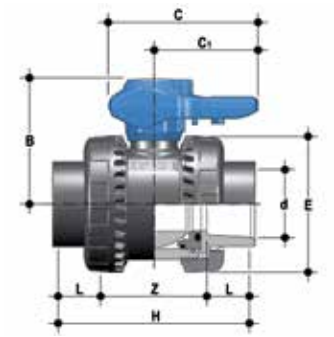
Easyfit 2-way ball valve with BSP threaded female ends

R	DN	PN	B	C	C_1	E	H	L	Z	g	Code
3/8”	10	16	49	64	44	54	82	11.4	59.2	180	VEEFV038E
1/2”	15	16	49	64	44	54	90	15	60	175	VEEFV012E
3/4”	20	16	62	78	55	63	93	16.3	60.4	260	VEEFV034E
1”	25	16	71	87	60	72	110	19.1	71.8	365	VEEFV100E
1” 1/4	32	16	82	102	72	85	127	21.4	84.2	565	VEEFV114E
1” 1/2	40	16	92	109	76	100	131	21.4	88.2	795	VEEFV112E
2”	50	16	110	133	94	118	161	25.7	109.6	1325	VEEFV200E

VEELV

Easyfit 2-way ball valve with female ends for solvent welding, BS series

d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
1/2”	15	16	49	64	44	54	82	16.5	49	175	VEELV012E
3/4”	20	16	62	78	55	63	91	19	53	260	VEELV034E
1”	25	16	71	87	60	72	103	22.5	58	365	VEELV100E
1” 1/4	32	16	82	102	72	85	120	26	68	565	VEELV114E
1” 1/2	40	16	92	109	76	100	139	30	79	795	VEELV112E
2”	50	16	110	133	94	118	174	36	102	1325	VEELV200E



VEEAV

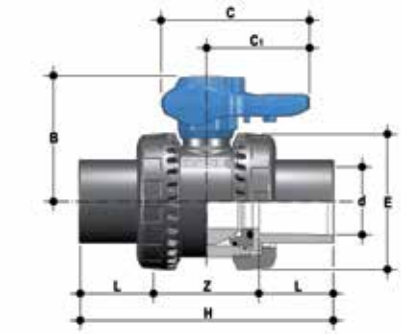
Easyfit 2-way ball valve with female ends for solvent welding, ASTM series

d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
1/2”	15	16	49	64	44	54	96	22.5	51	175	VEEAV012E
3/4”	20	16	62	78	55	63	105	25.5	54	260	VEEAV034E
1”	25	16	71	87	60	72	117	28.7	59.5	365	VEEAV100E
1” 1/4	32	16	82	102	72	85	136	32	72	565	VEEAV114E
1” 1/2	40	16	92	109	76	100	147	35	77	795	VEEAV112E
2”	50	16	110	133	94	118	174	38.2	97.6	1325	VEEAV200E

VEENV

Easyfit 2-way ball valve with female ends, NPT thread

R	DN	PN	B	C	C_1	E	H	L	Z	g	Code
3/8”	10	16	49	64	44	54	82	13.7	54.6	180	VEENV038E
1/2”	15	16	49	64	44	54	90	17.8	54.4	175	VEENV012E
3/4”	20	16	62	78	55	63	93	18	57	260	VEENV034E
1”	25	16	71	87	60	72	110	22.6	64.8	365	VEENV100E
1” 1/4	32	16	82	102	72	85	127	25.1	76.8	565	VEENV114E
1” 1/2	40	16	92	109	76	100	131	24.7	81.6	795	VEENV112E
2”	50	16	110	133	94	118	161	29.6	101.8	1325	VEENV200E



VEEJV

Easyfit 2-way ball valve with female ends for solvent welding, JIS series

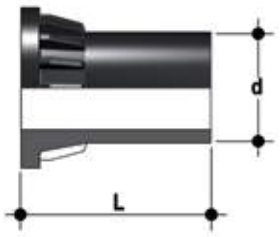
d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
1/2”	15	16	49	64	44	54	110	30	50	195	VEEJV012E
3/4”	20	16	62	78	55	63	123	35	53	285	VEEJV034E
1”	25	16	71	87	60	72	139	40	59	395	VEEJV100E
1” 1/4	32	16	82	102	72	85	156	44	68	600	VEEJV114E
1” 1/2	40	16	92	109	76	100	187	55	77	835	VEEJV112E
2”	50	16	110	133	94	118	228	63	102	1375	VEEJV200E

VEEGV

Easyfit 2-way ball valve with female ends, JIS thread

R	DN	PN	B	C	C_1	E	H	L	Z	g	Code
1/2"	15	16	49	64	44	54	82	16	50	175	VEEGV012E
3/4"	20	16	62	78	55	63	91	19	53	260	VEEGV034E
1"	25	16	71	87	60	72	103	22	59	365	VEEGV100E
1" 1/4	32	16	82	102	72	85	120	25	70	565	VEEGV114E
1" 1/2	40	16	92	109	76	100	139	26	87	795	VEEGV112E
2"	50	16	110	133	94	118	174	31	112	1325	VEEGV200E

ACCESSORIES



CVDE

Long spigot PE100 end connectors for joints with electrofusion fittings or for butt welding

d	DN	PN	L	SDR	Code
20	15	16	55	11	CVDE11020
25	20	16	70	11	CVDE11025
32	25	16	74	11	CVDE11032
40	32	16	78	11	CVDE11040
52	40	16	84	11	CVDE11050
63	50	16	91	11	CVDE11063

CVPV

Hose adaptor for ball valves

DN	PN	H	P_1	P_2	g	Code
40	16	246	50	52	840	CVPV050
50	16	273	60	64	1350	CVPV063

CVRV

Threaded male end connectors for ball valves

DN	R	PN	CH	H	L	LT	Z	g	Code
40	1" 1/2	16	52	196	21.4	63.4	153.2	795	CVRV112
50	2"	16	62	226	25.7	69.2	174.6	1325	CVRV200

EASYTORQUE KIT

Kit for union nut tightening adjustment and ball seat carrier for Easyfit DN 10÷50 valves.

d	DN	*Union nut tightening torque	*Seat carrier tightening torque	Code
3/8"-1/2"	10-15	5 N m - 3,69 Lbf ft	3 N m - 2,21 Lbf ft	KET01
3/4"	20	5 N m - 3,69 Lbf ft	3 N m - 2,21 Lbf ft	KET01
1"	25	6 N m - 4,43 Lbf ft	4 N m - 2,95 Lbf ft	KET01
1" 1/4	32	7 N m - 5,16 Lbf ft	4 N m - 2,95 Lbf ft	KET01
1" 1/2	40	8 N m - 5,90 Lbf ft	5 N m - 3,69 Lbf ft	KET01
2"	50	10 N m - 7,38 Lbf ft	6 N m - 4,43 Lbf ft	KET01

*calculated in ideal installation conditions

LCE

Transparent protection plug with tag holder

d	DN	Code
16	10	LCE020
20	15	LCE020
25	20	LCE025
32	25	LCE032
40	32	LCE040
50	40	LCE050
63	50	LCE063

LSE

Customisation and label printing set for Easyfit handle made up of precut adhesive sheets and software for guided label creation.

d	DN	Code
16	10	LSE020
20	15	LSE020
25	20	LSE025
32	25	LSE032
40	32	LSE040
50	40	LSE050
63	50	LSE063

CUSTOMISATION

The Easyfit VEE DN 10÷50 valve is set for the customisable Labelling System.

This system lets you create special labels to insert in the handle. This makes it extremely easy to apply company logos, identification serial numbers or service indications such as, for example, the valve function in the system, the transported fluid, but also specific information for customer service, such as the customer name or installation date or location on the valves.

The grey protection plug (A) housed on the handle can be replaced with the specific LCE accessory module.

This module is made up of a rigid transparent water-resistant PVC plug (B) and white tag holder (C) made of the same material, one side of which bears the FIP logo (fig. 2).

The holder, inserted in the plug, can be removed and, once overturned, used for customisation by applying labels printed with the software supplied with the LSE set.

Proceed as follows to apply the label on the valve:

1) Extract the handle from the valve body and extract its grey plug (fig. 1)
2) Apply the adhesive label on tag holder included in the LCE set to align the profiles matching the tab position.
3) Insert tag holder in the transparent plug so that the label is protected from the elements.
4) Apply the transparent plug on the handle matching the two fittings (one narrow and one wide) with their housings (fig. 3).

Fig. 1

Fig. 2

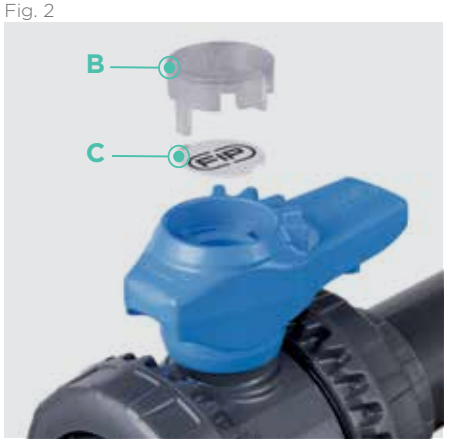


Fig. 3

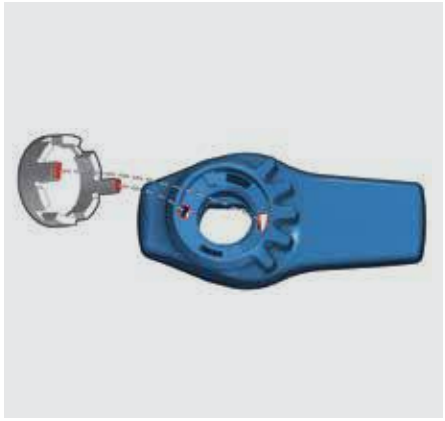
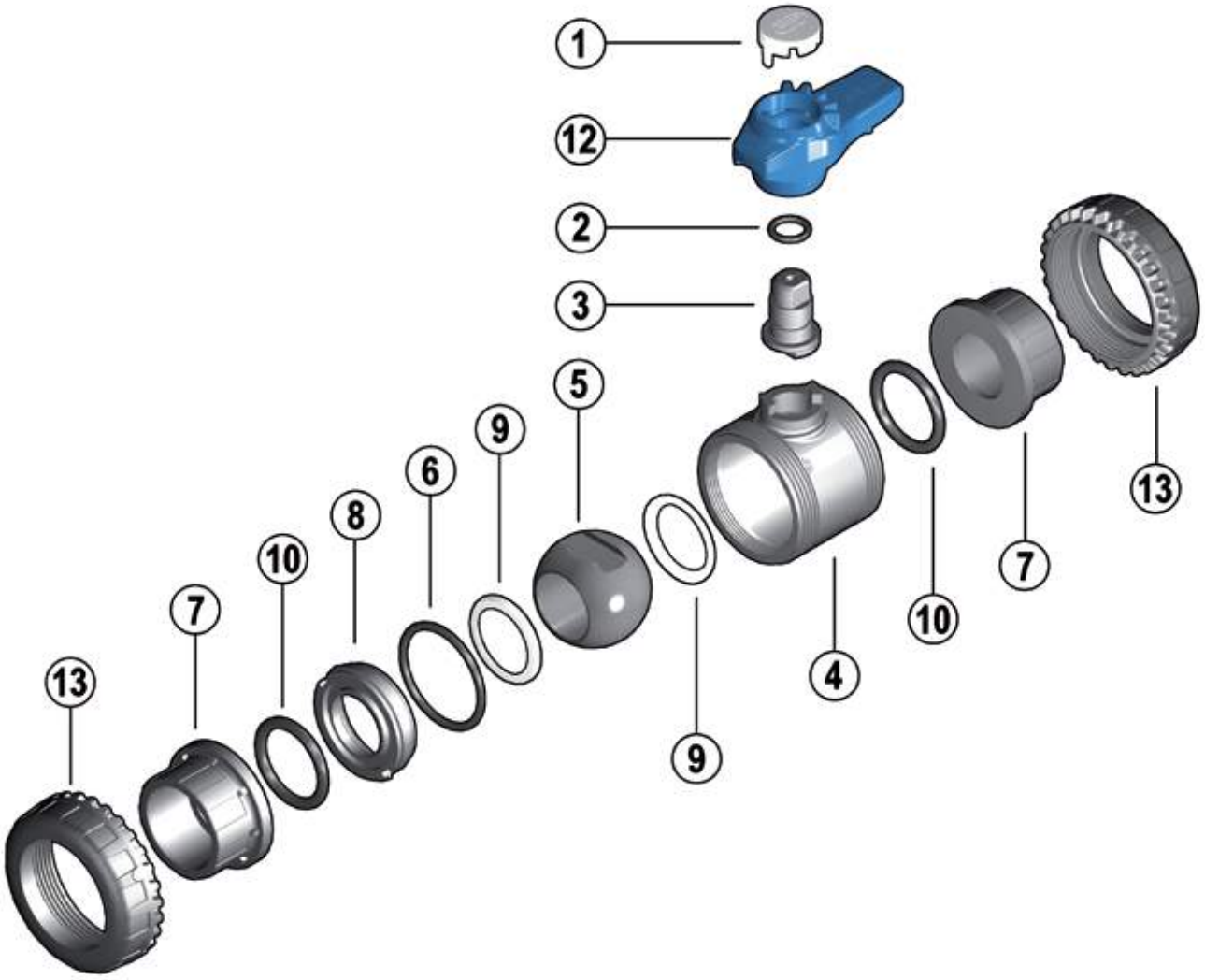


Fig. 4

COMPONENTS

EXPLODED VIEW



1 · Handle plug (PVC-U - 1)
2 · Stem O-Ring (EPDM - 2)*
3 · Stem (PVC-U - 1)
4 · Body (PVC-U - 1)
5 · Ball (PVC-U - 1)
6 · Radial seal O-Ring (EPDM - 1)*
7 · End connector (PVC-U - 2)
8 · Ball seat carrier (PVC-U - 1)
9 · Ball seat (PE - 2)
10 · Socket seal O-Ring (EPDM - 2)*
12 · Handle (HIPVC - 1)
13 · Union nut (PVC-U - 2)

* Spare parts
The component material and quantity supplied are indicated in the parentheses.

DISMOUNTING

1) Isolate the valve from the line (release the pressure and empty the pipeline).
2) Fully unscrew the union nuts (13) from the valve body and slide the body out sideways (fig. 5-6).

   To do this, we recommend you use the Easyfit handle as a tool (fig. 9-10)
3) Before dismounting, hold the valve in a vertical position and open it 45° to drain any liquid that might remain.
4) After closing the valve, remove the handle (12) (fig. 7) and insert the two protrusions in the lower side in the two apertures and in the carrier passage bore (8), extracting it by turning counter-clockwise (fig. 8).
5) Press on the ball from the side opposite the "REGULAR" label, being sure not to scratch it, until the ball seat carrier exits (8), then extract the ball (5).
6) Press the stem (3) inwards until it exits the body.
7) Remove the O-Rings (2, 6, 10) and ball seats (9) extracting them from their seats, as illustrated in the exploded view.

ASSEMBLY

1) All the O-Rings (2, 6, 10) must be inserted in their grooves as shown in the exploded view.
2) Insert the stem (3) from inside the body (4).
3) Place the ball seats (9) in the housings in the body (4) and in the carrier (8).
4) Insert the ball (5) rotating it to the closed position.
5) Screw the carrier (8) into the body and tighten up in the clockwise direction using the handle (12) to limit stop.
6) Position the valve between the end connectors (7) and tighten the union nuts (13) clockwise using the Easyfit multifunctional handle, being sure the socket seal O-Rings (10) do not exit the seats.
7) Position the handle (12) on the stem (3).

⚠ **Note:** during assembly operations, it is advisable to lubricate the rubber seals. Mineral oils are not recommended for this task as they react aggressively with EPDM rubber.

Fig. 5

Fig. 6

Fig. 7

Fig. 8

INSTALLATION

Before proceeding with installation. please follow these instructions carefully:

1) Check that the pipes to be connected to the valve are aligned in order to avoid mechanical stress on the threaded joints.
2) Unscrew the union nuts (13) and slide them onto the pipe.
3) Solvent weld or screw the end connectors (7) onto the pipe segments.
4) Position the valve between the end connectors (fig. 6).

   Warning: if a high pressure test is required, always position the body with the "REGULAR" label upstream from the fluid direction.
5) Fit the union nuts on the valve body and manually tighten clockwise until they become hard to turn; do not use wrenches or other tools that can damage the union nut surfaces.
6) Extract the handle (12) from the valve body and extract its grey plug (1) (fig. 2)
7) Overturn the handle and insert in on the valve stem matching the handle teeth (A) with the union nut teeth (B) (fig. 9-10).
8) Turn the handle counter-clockwise to fully tighten the union nut. The rotation directions to tighten (TIGHTEN) and loosen (UNTIGHTEN) the union nuts are indicated on the handle (fig. 11). Generally, if pipes are not offset, one turn is sufficient for correct tightening.

9) Repeat point 7 for the other union nut.

Note: A small force applied on the handle develops a torque much higher than manual tightening.

You can also, using the Easytorque kit (fig. 12), supplied as an accessory, tighten union nuts using a torque wrench to quantify the force and thus monitor the stress applied to the thermoplastic threads according to the installation indications in the instructions enclosed with the kit.

10) Apply the plug (1) on the handle (12) matching the two fittings (one narrow and one wide) with the relevant housings on the handle (fig. 3).

11) Install the handle (12) on the stem (3) again.

12) If necessary, support the pipe with FIP pipe clip model ZIKM and DSM distance plates.

⚠ WARNINGS

- If volatile liquid such as Hydrogen Peroxide (H2O2) or Sodium Hypochlorite (NaClO) is used, for safety reasons we recommend you contact the service centre. These liquids, upon vaporising, could create hazardous over pressures in the area between the body and ball.
- Do not use compressed air or other gases to test thermoplastic lines.
- Always avoid sudden closing manoeuvres and protect the valve from accidental manoeuvres.

Fig. 9

Fig. 10

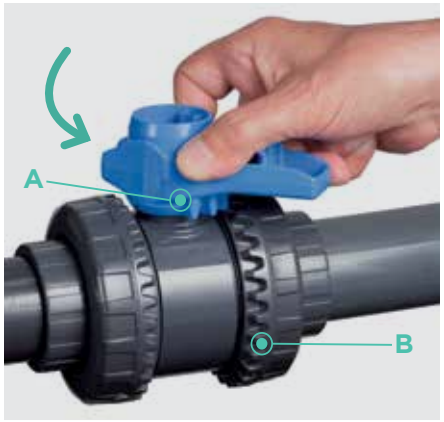


Fig. 11

Fig. 12

Code LEVAMAV

Aliaxis
UTILITIES & INDUSTRY

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FIP

Aliaxis
UTILITIES & INDUSTRY

FIP

VEE DN 65÷100
PVC-U

Easyfit 2-way ball valve

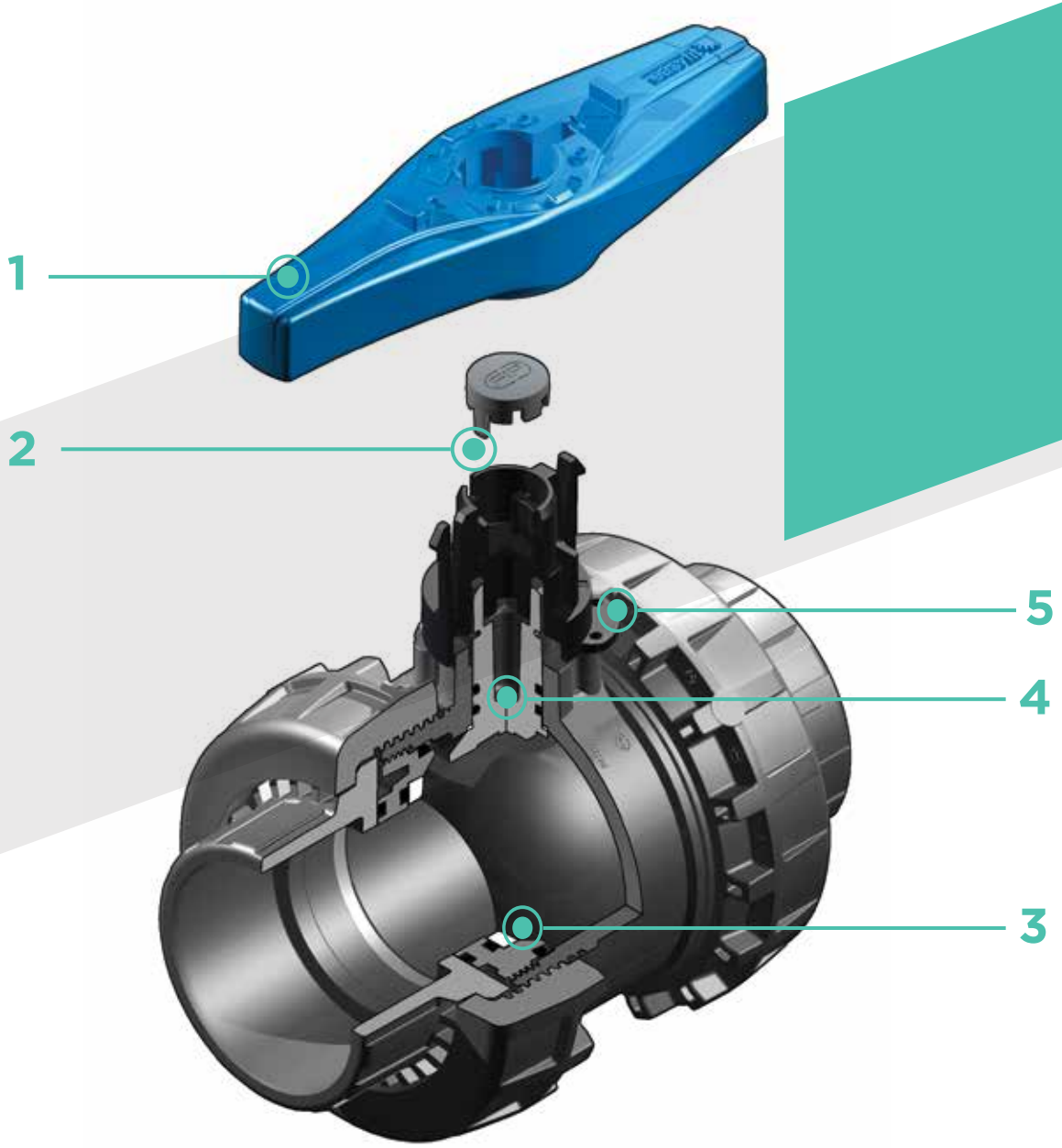
VEE
DN 65÷100

FIP and Giugiaro Design designed and developed VEE Easyfit, the innovative True Union ball valve that permits simple and safe installation for reliable service over time.

EASYFIT 2-WAY BALL VALVE

- **Patented Easyfit system**: innovative mechanism that lets you use the quick release handle to adjust the ball carrier.
- Connection system for solvent weld and threaded joints
- **Valve material compatibility** (PVC-U) with water, drinking ware and other food substances according to **current regulations**
- Easy radial dismounting allowing quick replacement of O-rings and ball seats without any need for tools
- **PN16 True Union valve body** made for PVC-U injection moulding and European Directive 97/23/EC compliant for PED pressurised equipment. ISO 9393 compliant test requirements
- Valve body with built-in anchoring frame for the special **Power Quick Easyfit module** dedicated to the installation of pneumatic and electric actuators or accessories
- Option of dismounting downstream pipes with the valve in the closed position
- Floating **full bore ball** with high surface finish made in CNC work stations to achieve precise dimensional tolerance and high surface finish

Technical specifications	
Construction	Easyfit 2-way True Union ball valve with locked carrier
Size range	DN 65 ÷ 100
Nominal pressure	PN 16 with water at 20 °C
Temperature range	0 °C ÷ 60 °C
Coupling standards	**Solvent welding:** EN ISO 1452, EN ISO 15493, BS 4346/1, DIN 8063, NF T54-028, ASTM D 2467, JIS K 6743. Pipe coupling capacity according to EN ISO 1452, EN ISO 15493, DIN 8062, NF T54-016, ASTM D 1785, JIS K 6741
	Thread: ISO 228-1, DIN 2999, ASTM D 2467, JIS B 0203.
Reference standards	**Construction criteria:** EN ISO 16135, EN ISO 1452, EN ISO 15493
	Test methods and requirements: ISO 9393
	Installation criteria: DVS 2204, DVS 2221, UNI 11242
	Actuator couplings: ISO 5211
Valve material	PVC-U
Seal material	EPDM (standard size O-Ring); PE (ball seats)
Control options	Manual control



1 **Innovative quick release Easyfit handle** made up of a central hub firmly coupled with the stem by a **dual spoke grip** that can be released from the hub with a simple operation and used as a **ball seat adjustment tool**

2 Settings for the customisable Labelling System using the LCE module (available as an accessory). The grey protection plug housed on the central hub can be replaced with the transparent plug and customisable tag holder with the LSE set (available as an accessory). The **customisation lets you identify the valve on the system** according to specific needs

3 **PE seal system with locked carrier** adjustable via the Easyfit quick release handle

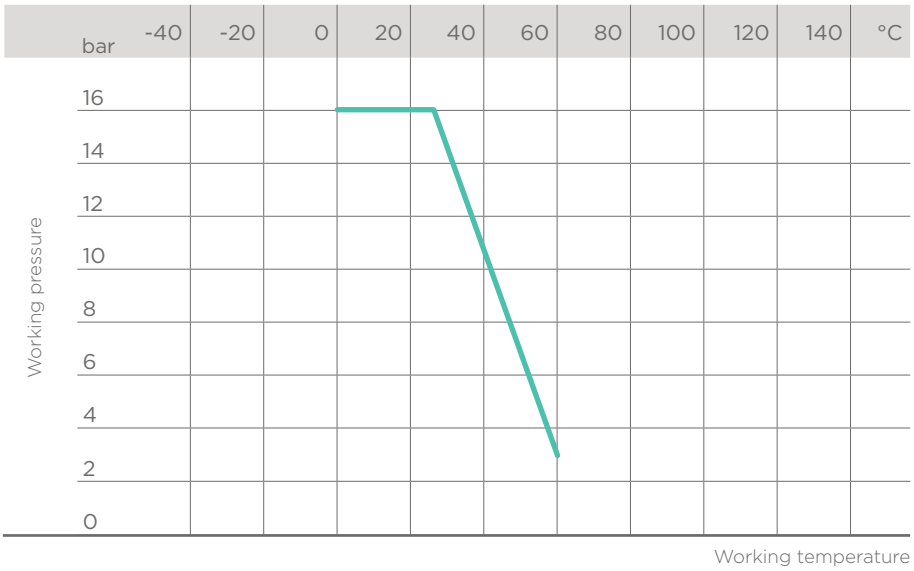
4 **Stem** with high surface finish and **double O-Ring and PTFE anti-friction disk** that limits friction to a minimum and grants excellent operating torque

5 Valve body set for SHE kit installation (available as an accessory) that blocks the closing and opening manoeuvres with a lock

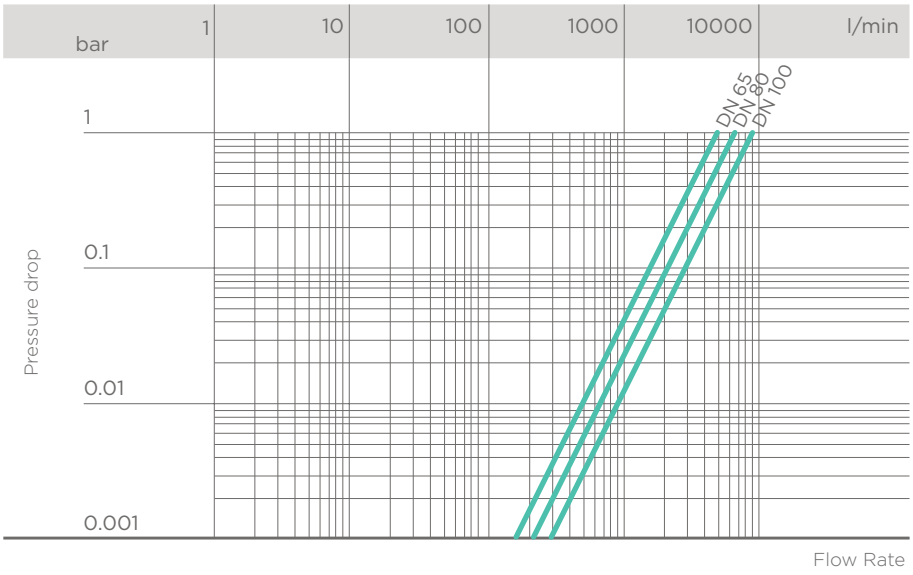
TECHNICAL DATA

PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and harmless fluids to which the material is classified as CHEMICALLY RESISTANT. In other cases, a reduction of the nominal PN pressure is required (25 years with safety factor).



PRESSURE DROP GRAPH



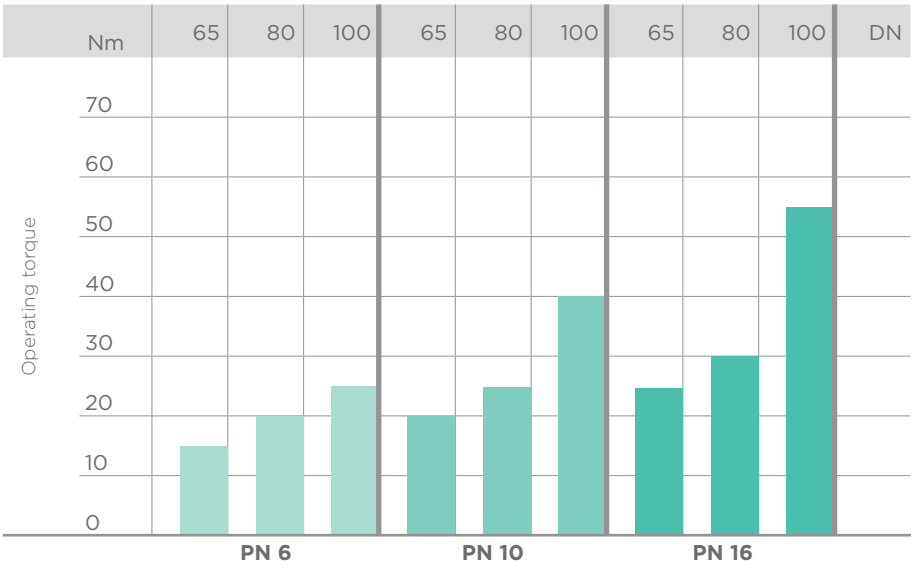
K_v100 FLOW COEFFICIENT

The K_v100 flow coefficient is the Q flow rate of litres per minute of water at a temperature of 20°C that will generate Δp= 1 bar pressure drop at a certain valve position.

The K_v100 values shown in the table are calculated with the valve completely open.

DN	65	80	100
K_v100 l/min	5000	7000	9400

OPERATING TORQUE AT MAXIMUM WORKING RPESSURE



DIMENSIONS

VEEIV

Easyfit 2-way ball valve with female ends for solvent welding, metric series

d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
75	65	16	142	214	115	157	211	44	123	2750	VEEIV075E
90	80	16	151	239	126	174	248	51	146	3432	VEEIV090E
110	100	16	174.5	270	145	212	283	61	161	5814	VEEIV110E

VEEFV

Easyfit 2-way ball valve with BSP threaded female ends

R	DN	PN	B	C	C_1	E	H	L	Z	g	Code
2" 1/2	65	16	142	214	115	157	211	30.2	150.6	2750	VEEFV212E
3"	80	16	151	239	126	174	248	33.3	181.4	3432	VEEFV300E
4"	100	16	174.5	270	145	212	283	39.3	204.4	5814	VEEFV400E

VEELV

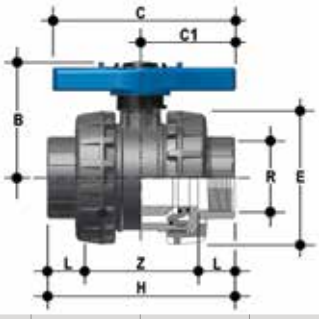
Easyfit 2-way ball valve with female ends, BS series

d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
2" 1/2	65	16	142	214	115	157	211	44	123	2750	VEELV212E
3"	80	16	151	239	126	174	248	51	146	3432	VEELV300E
4"	100	16	174.5	270	145	212	283	63	157	5814	VEELV400E

VEEAV

Easyfit 2-way ball valve with female ends, ASTM series

d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
2" 1/2	65	16	142	214	115	157	211	44.5	122	2750	VEEAV212E
3"	80	16	151	239	126	174	248	48	152	3432	VEEAV300E
4"	100	16	174.5	270	145	212	283	57.5	168	5814	VEEAV400E



VEENV

Easyfit 2-way ball valve with female ends, NPT thread

R	DN	PN	B	C	C_1	E	H	L	Z	g	Code
2" 1/2	65	16	142	214	115	157	211	33.2	144.6	2750	VEENV212E
3"	80	16	151	239	126	174	248	35.5	177	3432	VEENV300E
4"	100	16	174.5	270	145	212	283	37.6	207.8	5814	VEENV400E

VEEJV

Easyfit 2-way ball valve with female ends, JIS series

d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
2" 1/2	65	16	142	214	115	157	243	61	121	2750	VEEJV212E
3"	80	16	151	239	126	174	272	64.5	143	3432	VEEJV300E
4"	100	16	174.5	270	145	212	332	84	164	5814	VEEJV400E

VEEGV

Easyfit 2-way ball valve with female ends, JIS thread

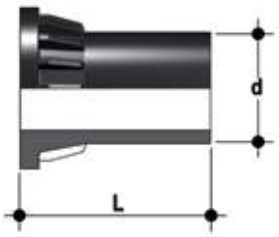
R	DN	PN	B	C	C_1	E	H	L	Z	g	Code
2" 1/2	65	16	142	214	115	157	211	35	141	2750	VEEGV212E
3"	80	16	151	239	126	174	248	40	168	3432	VEEGV300E
4"	100	16	174.5	270	145	212	283	45	193	5814	VEEGV400E

VEEBEV

Easyfit 2-way ball valve with PE100 SDR 11 male end connectors for butt welding or electrofusion (CVDE)

d	DN	PN	B	C	C_1	E	H	L	Z	g	Code
75	65	16	141.5	214	115	157	331	71	189	2286	VEEBEV075E
90	80	10	151	239	126	174	367	88	191	3059	VEEBEV090E
110	100	10	174.5	270	145	212	407	92	223	5814	VEEBEV110E

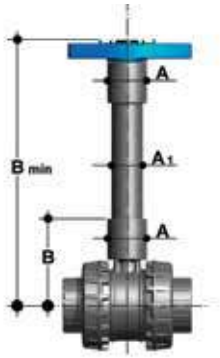
ACCESSORIES



CVDE

Long spigot PE100 end connectors for joints with electrofusion fittings or for butt welding

d	DN	PN	L	SDR	Code
75	65	16	111	11	CVDE11075
90	80	16	118	11	CVDE11090VXE
110	100	16	127	11	CVDE11110VXE



PSE

Stem extension

d	inch	DN	A	A_1	B	B min	Code ISO pipe	Code ASTM-BS pipe
75	2" 1/2	65	76	63	159	364	PSE090	PSE300
90	3"	80	76	63	166	371	PSE090	PSE300
110	4"	100	76	63	186	433	PSE110	PSE400

LCE

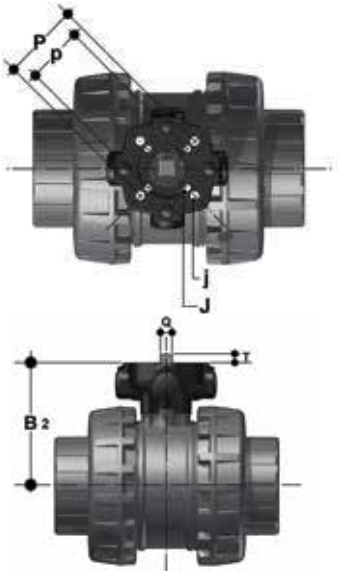
Transparent protection plug with tag holder

d	DN	Code
75	65	LCE040
90	80	LCE040
110	100	LCE040

LSE

Customisation and label printing set for Easyfit handle made up of precut adhesive sheets and software for guided label creation.

d	DN	Code
75	65	LSE040
90	80	LSE040
110	100	LSE040



POWER QUICK EASYFIT

The valve can be equipped with pneumatic or electric standard actuators and gearboxfor heavy-duty operations, using the PP-GR module reproducing the drilling pattern foreseen by ISO 5211.

d	DN	B_2	Q	T	p x j	P x J	Code
75	65	129	14	16	F05 x 6,5	F07 x 8,5	PQE090
90	80	136	14	16	F05 x 6,5	F07 x 8,5	PQE090
110	100	156	17	19	F05 x 6,5	F07 x 8,5	PQE110

SHE

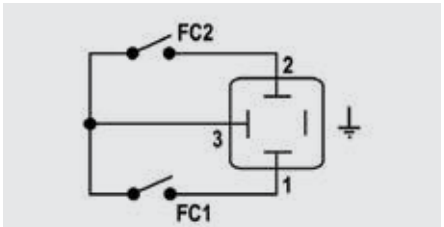
Anti-tampering lock kit

d	DN	Code
75	65	SHE090
90	80	SHE090
110	100	SHE110

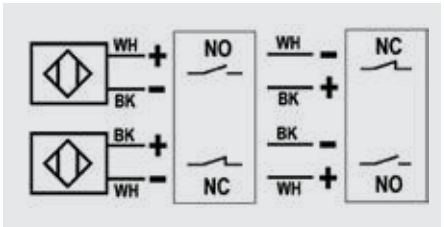
MSE

MSE is a limit switch box with electromechanical or inductive micro switches to remotely signal the valve position. Manual valve installation is possible using the Power Quick Easyfit actuation module.
The box can be assembled on the VEE valve even if already installed on the system.

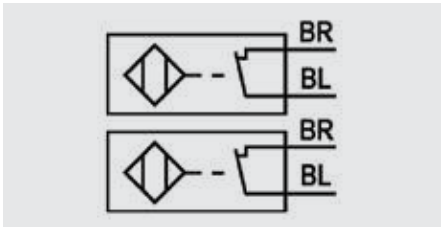
d	DN	A	B	B_1	Code electromechanical	Code inductive	Code Namur
75	65	139	203	79	MSE1M	MSE1I	MSE1N
90	80	146	210	87	MSE1M	MSE1I	MSE1N
110	100	166	231	106	MSE2M	MSE2I	MSE2N



Electromechanical



Inductive



Namur

WH = white; BK = black; BL = blue; BR = brown

Switch type	Flow Rate	Lifetime [drives]	Operating voltage	Nominal voltage	Working pressure	Voltage drop	No-load supply current	Protection rate
Electromechanical	250 V - 5 A	3 x 10^7	-	-	-	-	-	IP65
Inductive	-	-	5 ÷ 36 V	-	4 ÷ 200 mA	< 4,6 V	< 0,8 mA	IP65
Namur*	-	-	7,5 ÷ 30 V DC**	8,2 V DC	< 30 mA**	-	-	IP65

* To be used with an amplifier
** Outside areas with explosion risks

CUSTOMISATION

The Easyfit VEE DN 65÷100 valve is set for the customisable Labelling System.

This system lets you create special labels to insert in the handle. This makes it extremely easy to apply company logos, identification serial numbers or service indications such as, for example, the valve function in the system, the transported fluid, but also specific information for customer service, such as the customer name or installation date or location on the valves.

The grey protection plug (A) housed on the handle can be replaced with the specific LCE accessory module.

This module is made up of a rigid transparent water-resistant PVC plug (B) and white tag holder (C) made of the same material, one side of which bears the FIP logo (fig. 2).

The holder, inserted in the plug, can be removed and, once overturned, used for customisation by applying labels printed with the software supplied with the LSE set.

Proceed as follows to apply the label on the valve:

1) Release the handle from the central hub (D) and extract the grey plug (fig. 1).
2) Apply the adhesive label on tag holder included in the LCE set to align the profiles matching the tab position.
3) Insert tag holder in the transparent plug so that the label is protected from the elements (fig. 3).
4) Apply the transparent plug on the central hub matching the two fittings (one narrow and one wide) with the relevant housings.

Fig. 1

Fig. 2

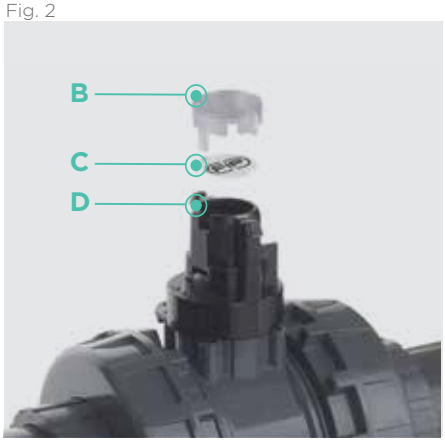
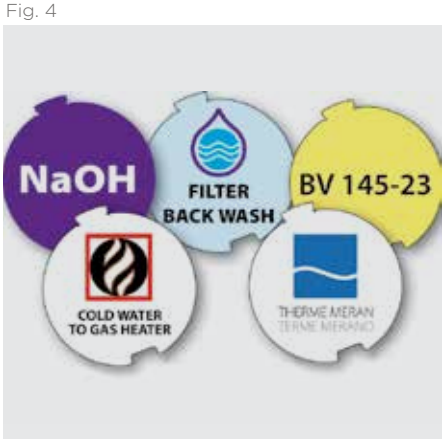


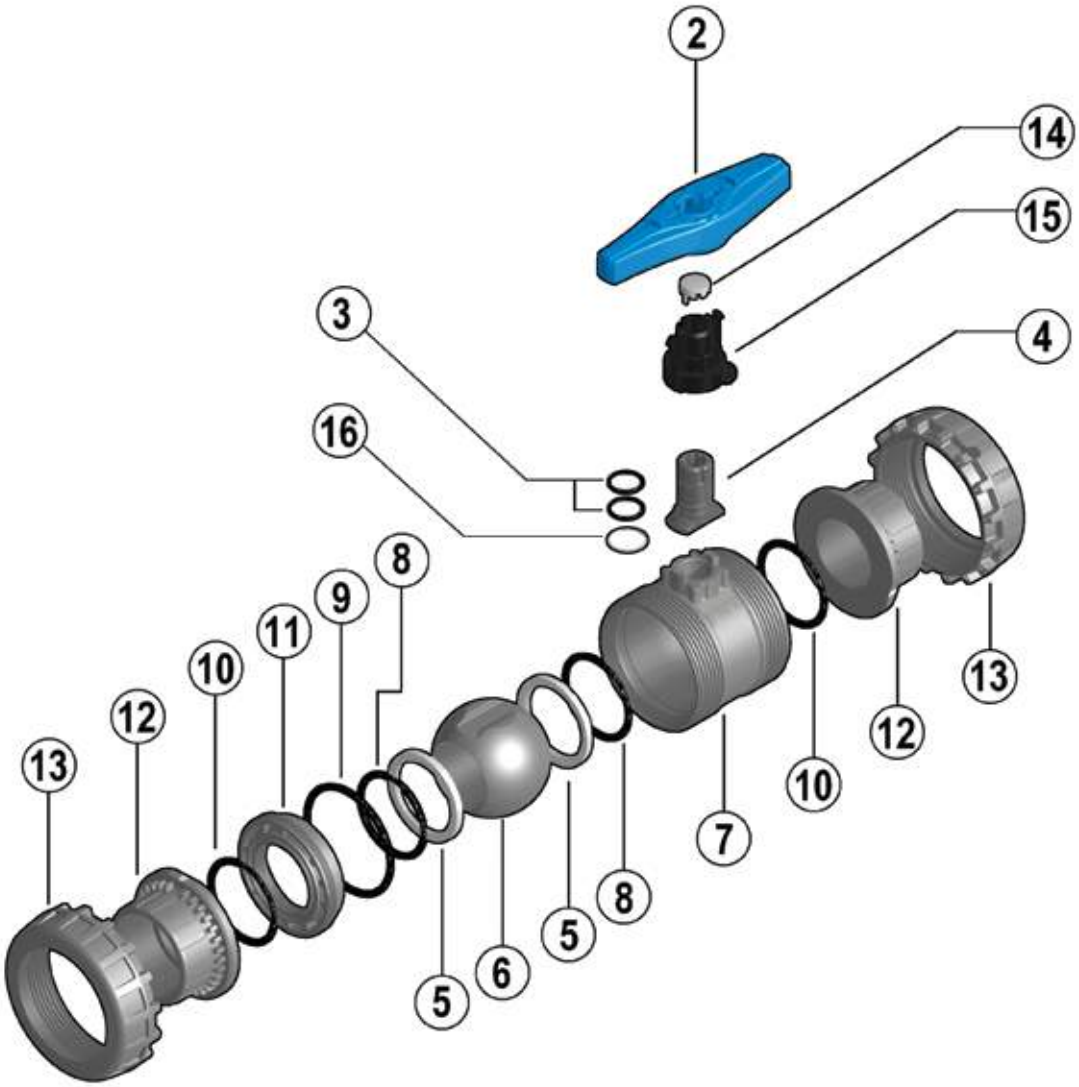
Fig. 3

Fig. 4



COMPONENTS

EXPLODED VIEW



2 · Easyfit quick release handle (HIPVC - 1)
3 · Stem O-Ring (EPDM - 2)*
4 · Stem (PVC-U - 1)
5 · Ball seat (PE - 2)*
6 · Ball (PVC-U - 1)*
7 · Body (PVC-U - 1)
8 · Ball seat O-Ring (EPDM, FPM - 2)
9 · Radial seal O-Ring (EPDM - 1)*
10 · Socket seal O-Ring (EPDM - 2)*
11 · Ball seat carrier (PVC-U - 1)
12 · End connector (PVC-U - 2)
13 · Union nut (PVC-U - 2)
14 · Grey protection plug (PVC - 1)
15 · Central hub (HIPVC - 1)
16 · Anti-friction disk (PTFE - 1)*

* Spare parts
The component material and quantity supplied are indicated in the parentheses.

DISMOUNTING

1) Isolate the valve from the line (release the pressure and empty the pipeline).
2) Fully unscrew the union nuts (13) from the valve body and slide the body out sideways (7) (fig. 7-8).
3) Before dismounting, hold the valve in a vertical position and open it 45° to drain any liquid that might remain.
4) Open the valve.
5) Remove the ball seat carrier (11) using the Easyfit quick release handle (2). Extract the handle from the central hub (15) pushing towards the hub hinge centres (fig. 5-6). Insert the two protrusion at the top of the handle in the carrier seats (11) and unscrew, extracting it by turning counter-clockwise (fig. 9-10).
6) Press on the ball (6) from the side opposite the "REGULAR" label, being sure not to scratch it, until the ball seat exits (11) then extract the ball (6).
7) Remove the central hub (15) firmly sliding it off the stem (4). Press the stem inwards and extract it from the body and remove the anti-friction disk (16).
8) Remove the O-Ring (3, 8, 9, 10) and ball seats (5) extracting them from their seats, as illustrated in the exploded view.

ASSEMBLY

1) All the O-rings (3, 8, 9, 10) must be inserted in their grooves as shown in the exploded view.
2) Place the anti-friction disk (16) on the stem (4) and insert it in the body (7).
3) Place the ball seats (5) in the housings in the body (7) and in the carrier (11).
4) Insert the ball (6) rotating it to the closed position.
5) Screw the carrier (11) into the body and tighten up in the clockwise direction using the handle (2) to limit stop.
6) Place the central hub (15) on the stem (4) firmly pressing down to match the internal hub key with one of the two seats on the stem.
7) Position the valve between the end connectors (12) and tighten the union nuts (13) clockwise making sure the socket seal O-Rings (10) do not exit the seats (fig. 7-8).
8) Reposition the handle (2) on the central hub (15) making sure the two grooves in the central handle bore match the two grooves on the side of the hub and slightly press down until the two hinges click.

⚠

Note: during assembly operations, it is advisable to lubricate the rubber seals. Mineral oils are not recommended for this task as they react aggressively with EPDM rubber.

Fig. 5

Fig. 6

Fig. 7

Fig. 8

INSTALLATION

Before proceeding with installation. please follow these instructions carefully:

1) Check that the pipes to be connected to the valve are aligned in order to avoid mechanical stress on the threaded joints.
2) Unscrew the union nuts (13) from the body (7) and insert them in the pipe segments.
3) Solvent weld or screw the end connectors (12) onto the pipe segments.
4) Position the valve between the end connectors (fig. 8).

   Warning: if a high pressure test is required, always position the body with the "REGULAR" label upstream from the fluid direction.
5) Fit the union nuts on the valve body and tighten clockwise (fig. 7).

6) If necessary, support the pipe with FIP pipe clip model ZIKM and DSM distance plates.

The VEE valve can be equipped with a simple locking device by inserting a lock to protect the system against tampering (fig. 12). The valve body and hub are, in fact, set to house a lockable plate on the valve body using two self-threading screws (see SHE accessories) (fig. 11),

⚠ WARNINGS

- If volatile liquid such as Hydrogen Peroxide (H2O2) or Sodium Hypochlorite (NaClO) are used, for safety reasons we recommend you contact the service centre. These liquids, upon vaporising, could create hazardous over pressures in the area between the body and ball.
- Always avoid sudden closing manoeuvres and protect the valve from accidental manoeuvres.

Fig. 9

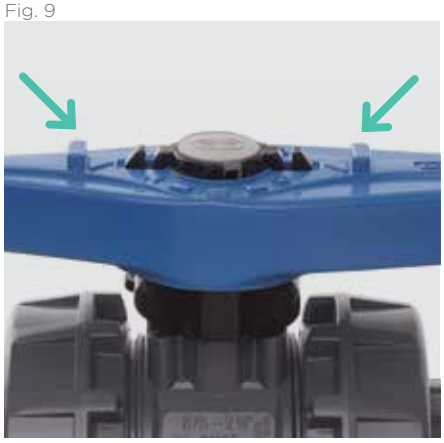


Fig. 10

Fig. 11

Fig. 12

Code LEVAMAV

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